WHAT IS CLAIMED IS:

1. A manufacturing method of a semiconductor device, comprising the steps of:

a step of forming a plurality of electrodes on a front face of a semiconductor chip;

a step of covering the front face of the semiconductor chip with a resin insulating film;

a step of covering all of an upper surface and side surfaces of said resin insulating film with a metal protective film; and

a step of providing an electrical connecting portion of at least any of the plurality of electrodes at a reverse face of the semiconductor chip.

2. The manufacturing method of the semiconductor device according to claim 1,

wherein a metal layer is formed on a peripheral isolation region on the front face of the semiconductor chip when covering the side surface of the resin insulating film with the metal protective film.

3. The manufacturing method of the semiconductor device according to claim 1, further comprising the step of:

a step of exposing one of the plurality of electrodes from the upper surface of said resin insulating film to be connected to the metal protective film.